10-20-1977

Students Test Environmental Planning Model

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CHAMINADE-JULIENNE HIGH SCHOOL

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Environmental Planning Model

DAYTON, Ohio, October 20, 1977 --- A $30,876 grant to the University of Dayton will be used to sponsor a nine-week demonstration in environmental education at Chaminade-Julienne High School during the spring of 1978. The grant is from the Department of Health, Education and Welfare.

Purpose of the project will be to test a new method of teaching which makes use of a computer to help students weigh factors involved in an environmental problem and seek alternative solutions, according to Lorna Wallick, an environmental scientist at the UD Research Institute who is project director.

The method, called "Interpretive Structural Modeling" (ISM), has been used by Dayton city commissioners as well as a task force of Dayton citizens to plan for the city's future.

Its first application as an educational tool will be in biology and world problems classes at Chaminade-Julienne. The demonstration will be entitled "An Interdisciplinary Process Approach to Environmental Education."

"Project participants at UD and Chaminade-Julienne believe the modeling method can give students, as well as adult decision makers, an improved tool for analyzing complex environmental problems," Wallick says. "To that end, they have formed a research team to test ISM's applicability to the high school classroom."

Serving as control groups in the demonstration will be second sections of world problems and biology classes at Chaminade-Julienne which will not be exposed to the ISM method. Tests prior to and after the demonstration will provide a means of evaluation.

If the students involved in the demonstration can learn to analyze environmental problems without sacrificing factual knowledge in the process, the research team will consider ISM a successful classroom method, according to Wallick. The team will then prepare a short-course for teachers on how to use ISM in the classroom. The proposed short course will be offered next summer, according to Wallick.

Students will work on specific problems in the local environment. The problems have not yet been chosen. One of the selection criteria will be that the problems not be unique to Dayton alone.

The tentative schedule calls for the first two weeks of the quarter to be spent in introductory lectures by the teachers who will introduce the factors contributing to environmental problems. During the next two weeks, students will choose and refine their list of elements contributing to the problem and establish the interrelationships among them. The following two weeks will be spent in modeling sessions with the computer, using a remote terminal and video screens at the school. Each element will be analyzed with respect to the others with the aid of the computer. The initial results shown by the computer diagram will be analyzed over two weeks, and the model refined. The next week will be spent discussing possible actions that might be taken to solve environmental problems by taking the contributing factors into account.

The research team, in addition to Wallick, includes Helen Frye and James E. Gay of UD's Department of Secondary Education; Bro. Raymond Fitz and Joanne Troha of UD's Engineering and Public Policy Group; and from Chaminade-Julienne, Kathy Higgins, a biology teacher, and Barbara Hinkle, a social studies teacher.

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